

CLAIMS:

1. Transmission cable, the transmission cable comprising:
 - a first cable segment and a second cable segment, wherein the first cable segment has at least one first conductor and wherein the second cable segment has at least one second conductor;
- 5 wherein the at least one first conductor of the first cable segment is connected to the at least one second conductor of the second cable segment via at least one series impedance.
- 10 2. The transmission cable of claim 1,
 - wherein the transmission cable is a coaxial type cable including the first and second cable segments;
 - wherein the at least one first conductor includes a first screen and a first inner conductor;
 - wherein the at least one second conductor includes a second screen and a second inner conductor;
 - 15 wherein the first screen is connected to the second screen by means of a series capacitor of the at least one series impedance; and
 - wherein the first inner conductor is connected to the second inner conductor by means of another series capacitor of the at least one series impedance.
- 20 3. The transmission cable of claim 1, wherein the cable has a first end and a second end, wherein each of the first and second ends is provided with a mixer for shifting a frequency of the signal transmitted by the cable.
- 25 4. The transmission cable of claim 1, wherein the at least one series impedance includes a capacitor with a capacity in the range of 1 pF.

5. The transmission cable of claim 1, wherein the at least one series impedance includes an inductor with an inductance in the range of 10 nH.

5 6. MRI system with a transmission cable, the transmission cable comprising:

a first cable segment and a second cable segment, wherein the first cable segment has at least one first conductor and wherein the second cable segment has at least one second conductor;

10 wherein the at least one first conductor of the first cable segment is connected to the at least one second conductor of the second cable segment via at least one series impedance.

7. Transmission cable, comprising:

15 a first cable segment and a second cable segment,

wherein the first cable segment includes a plurality of first conductors and wherein the second cable segment includes a plurality of second conductors;

wherein the plurality of first conductors is respectively connected to the plurality of second conductors via a plurality of series impedances.

20

8. MR-catheter, comprising:

a transmission cable, wherein the transmission cable includes:

a first cable segment and a second cable segment, wherein the first cable segment has at least one first conductor and wherein the second cable segment has at least one second conductor;

25 wherein the at least one first conductor of the first cable segment is connected to the at least one second conductor of the second cable segment via at least one series impedance.

30

9. RF-coil, the coil comprising:
 - a transmission cable, the transmission cable including:
 - a first cable segment and a second cable segment, wherein the first cable segment has at least one first conductor and wherein the second cable segment has at least one second conductor;
 - wherein the at least one first conductor of the first cable segment is connected to the at least one second conductor of the second cable segment via at least one series impedance.